

4 FEB 1974

MEMORANDUM FOR: Chief, Field Engineering Branch, RECD/OL

SUBJECT : Air Conditioning Design Analysis on the  
Properties Incorporate Office Building

1. Based on the building floor layout, structure design, and unavailable space for air conditioning equipment, the roof type air conditioning concept was obviously dictated by the foregoing reasons.

2. With the roof joists and beam design, the mechanical design firm has provided an acceptable air distribution system.

3. In addition to the attached comments for the A & E, the following should be considered for discussion at your next meeting:

a. Fire detection and protecting system.

b. Smoke detector in the return air duct of air conditioner #1. This could be a requirement by our safety personnel at a later time.

c. Standpipe if required by the [REDACTED] Code.

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d. Increased building height to provide better duct size and to facilitate duct modification in the future which is always a necessity with our type of operation.

25X1A6a 4. Economize cooling (outside air) is not practical in the [REDACTED] area because of minimum number of days below 65 degrees F. During failures of cooling components, the windows and/or doors shall be opened to provide outside air when the outside air temperature is less than room ambient temperature.

5. Hopefully this expeditiously HVAC review and comments will be of some contribution in assisting you on this project.

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[REDACTED]

Chief  
Mechanical Section, HEB/RECD/OL

Att

HVAC Comments To Be Considered In The Final Design:

1. A/C #1 shall have two (2) compressors to provide redundancy. In addition it is recommended that the compressors have capacity step reduction or 50 percent gas bypass reduction.
2. A/C #2 shall be curb mounted with bottom air discharge and return. For security reasons, roof exposed duct would not be acceptable. The roof curb support shall be factory furnished with A/C unit.
3. To minimize possible high noise level from ceiling diffusers nearest A/C units, duct sections near main air discharge should be lined with duct lining material.
4. Thermostat in room 106 shall be relocated into room 107 and away from heat producing equipment.
5. Thermostat assembly shall consist of heating and cooling thermostats. Each thermostat shall consist of matching sub-base with switches for heating and cooling (with manual or automatic changeover) and continuous or automatic fan operation, and ON-OFF switch. The ON-OFF switch will provide the building occupants to turn off each system prior to leaving the particular area.
6. The indicated exhaust fan in room 142 should not be required (unless used as a conference room) because the toilet exhaust fan exceeds the indicated fresh air makeup.
7. The proposed exhaust fan to be installed in room 118 will perhaps exceed the fresh air from A/C #2. The fan, when installed, should be without gravity or motorized damper so as to provide air relief when the fan is not running.
8. In lieu of an exhaust fan for the vaulted area, a return air relief damper could be installed in the return air duct as it leaves the vaulted area and discharged into the corridor below. Alternate location is a factory installed air relief damper on A/C #1. The exhaust fan as shown shall remain if high heat or fume producing equipment is to be installed in room 105.